HW6 (Due 2018/04/30)

1. (**Pattern matching**) Write a program to search a pattern in text. The program prompts users to input text (at most 10 lines) and pattern to search. If the pattern exists in the text, the program displays the position(s) of pattern; otherwise, displays "Not found".

    Sample I/O: (The italics for program output and boldfaces for user input)

    > *Please input text (at most 10 lines):*
    > **Write a program to search a target in an *n×m* matrix of integers, where 1 ≤ *n, m* ≤ 100. The program prompts users to input *n, m*, the elements of an *n×m* matrix and targets to search. If a searching target exists in the matrix, the program displays the position of target; otherwise, displays "Not found".**
    > *Please input pattern:*
    > **matrix**
    > *Found at*
    > *Line 1 Col 45*
    > *Line 2 Col 72*
    > *Line 3 Col 59*
    > *Please input pattern:*
    > **Matrix**
    > *Not found.*

    Bonus:

    1. You can get bonus if your program can match pattern in non-case-sensitive way.

    Sample I/O: (The italics for program output and boldfaces for user input)

    > *Please input text (at most 10 lines):*
    > **Write a program to search a target in an *n×m* matrix of integers, where 1 ≤ *n, m* ≤ 100. The program prompts users to input *n, m*, the elements of an *n×m* matrix and targets to search. If a searching target exists in the matrix, the program displays the position of target; otherwise, displays "Not found".**
    > *Please input pattern:*
    > **Matrix**
    > *Found at*
    > *Line 1 Col 45*
    > *Line 2 Col 72*
    > *Line 3 Col 59*
    > *Please input pattern:*
    > **algorithm**
    > *Not found.*